

## Magnetic survey for buried old kilns with paleomagnetic and rock magnetic interpretation

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Magnetic surveys at an old kiln site cluster in Kagoshima Pref., southwest Japan were conducted, and five magnetic anomalies were detected on the hill slopes, based on a Cretaceous sedimentary rocks. A magnetic anomaly map at one of the sites was drawn and an elongated magnetic anomaly zone, along to the upward direction of the slope with 6 to 8 m length, was found. On the other hand, we obtained the paleomagnetic and rock magnetic results for the samples from an excavated old kiln, located nearby the magnetic anomaly site. Assuming the buried source of magnetic anomaly in consideration of paleomagnetic data, the expected magnetic field on the ground surface is calculated and it is well consistent between the observation and the calculation. It can be concluded that the source of the magnetic anomaly is a floor of an old kiln buried 40cm below the surface, northwardly magnetized. This result can indicate that the paleomagnetic and rock magnetic results provide a validated information about the underground objects in the magnetic surveys.

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